Evidence Update

Summary of a Cochrane Review

Maternal Health Series

What drug should be used to treat primary postpartum haemorrhage?

Injectable oxytocin or ergometrine.

Background

Postpartum haemorrhage is one of the main causes of maternal death. Oxytocin and ergometrine are standard treatments. Misoprostol is a newer drug which is a potential alternative or addition to standard treatment.

Inclusion criteria

Studies:

Randomized controlled trials in women with primary postpartum haemorrhage after delivery.

Intervention:

Uterotonic drug therapy versus control, placebo, or a different uterotonic drug regimen.

Outcomes:

Maternal mortality, serious maternal morbidity, or hysterectomy

Measures of bleeding, such as blood loss.

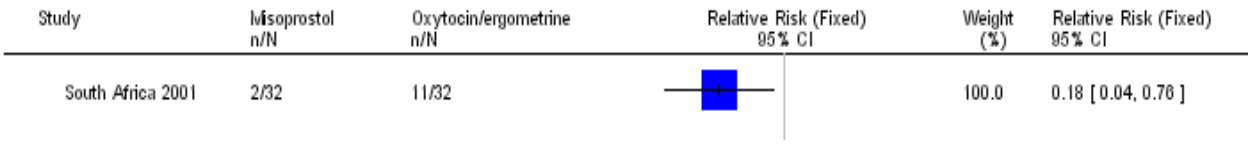
Side effects.

Results

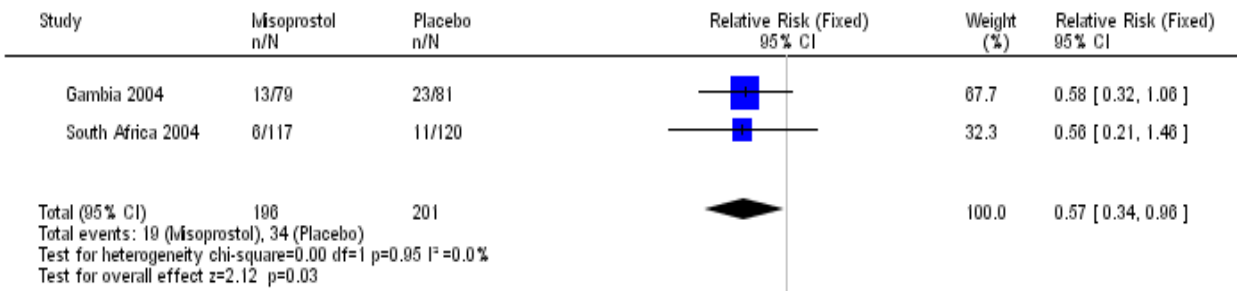
- Three trials of 462 women were included, all adequately concealed.
- Two trials of misoprostol versus placebo did not demonstrate an effect on maternal mortality or major morbidity.
- Rectal misoprostol was more likely to stop haemorrhage within 20 minutes (relative risk 0.18, 95% confidence interval 0.07 to 0.76; 64 women, 1 trial) and reduced the number of women needing additional uterotonic drugs (RR 0.18, 95% CI 0.07 to 0.76; 64 women, 1 trial) when compared with a combination of syntometrine and oxytocin as first-line therapy.
- In two placebo-controlled trials, use of misoprostol (when bleeding persisted after treatment with conventional uterotonics) was associated with a significant reduction in the number of women with blood loss of 500 mL or more after enrolment (RR 0.57, 95% CI 0.34 to 0.96; 397 women, 2 trials), but made no difference to blood loss over 1000 mL, average blood loss, or need for blood transfusion.
- Misprostol use in women with persistent bleeding after conventional uterotonic treatment was associated with increased shivering (RR 2.31, 95% CI 1.68 to 3.18; 394 women, 2 trials) and maternal pyrexia (RR 6.4, 95% CI 1.781 to 23.96; 392 women, 2 trials).

Adapted from Mousa HA, Alfirevic Z. Treatment for primary postpartum haemorrhage. *Cochrane Database of Systematic Reviews* 2007, Issue 1. Art. No.: CD003249. DOI: 10.1002/14651858. CD003249.pub2. *Evidence Update* published in April 2009.

Misoprostol vs syntometrine and oxytocin: persistent haemorrhage



Misoprostol (after conventional uterotonic treatment) vs placebo: blood loss of 500 mL or more



Authors' conclusions

Implications for practice:

There is not enough evidence to determine the best drug treatment for women with primary postpartum haemorrhage.

Implications for research:

Trials comparing different drug treatments for primary postpartum haemorrhage are needed to identify the best approach in terms of drug combinations, route, and dose. Trials are also needed to identify the best approaches to treatment where uterotonic drug treatment fails.

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